



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 980H LOADER 6583 (S/N JMS05055)
Component
Rear Right Final Drive
Fluid
TULCO LUBSOIL TO-4 50 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003056	TO10002733	TO10002312
Sample Date		Client Info		08 Jan 2024	02 Oct 2023	14 Jul 2023
Machine Age	hrs	Client Info		34718	34179	33615
Oil Age	hrs	Client Info		3115	2576	2012
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		None	None	None
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>500	44	38	52
Iron	ppm	ASTM D5185m	>800	56	59	72
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>15	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>75	2	1	3
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	2	1	<1
Tin	ppm	ASTM D5185m	>8	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

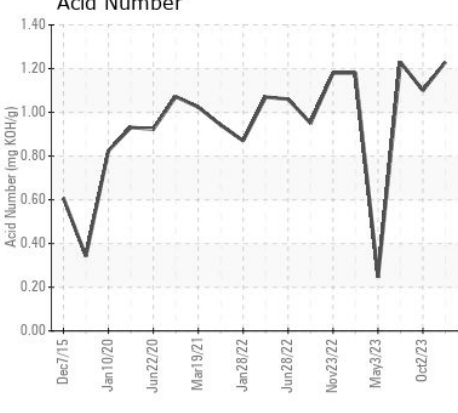
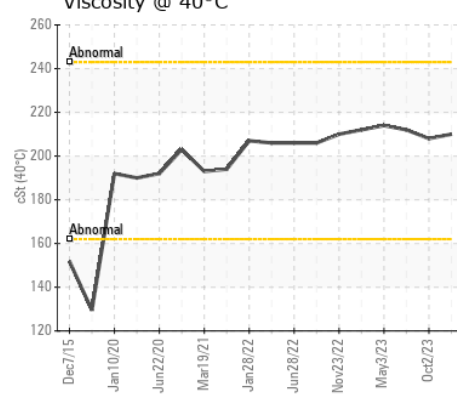
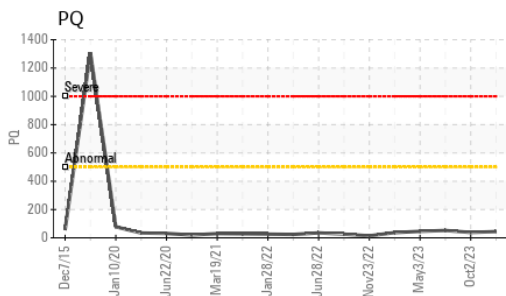
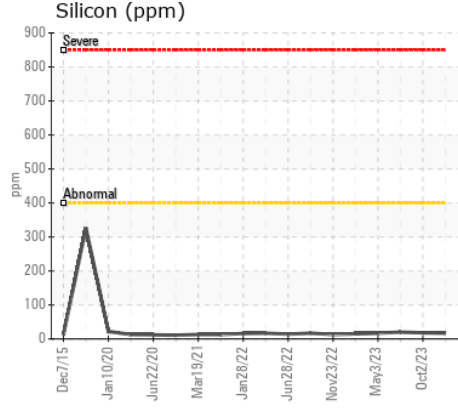
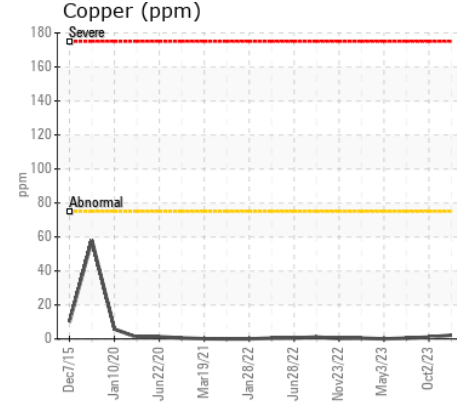
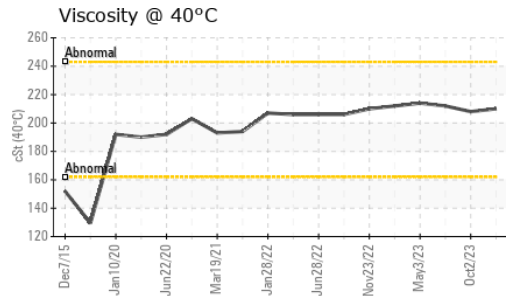
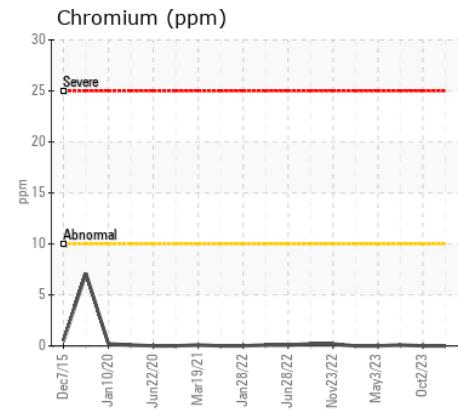
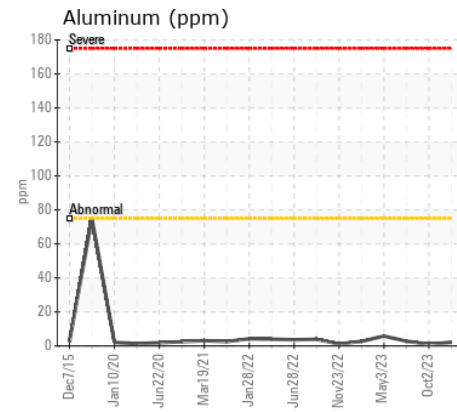
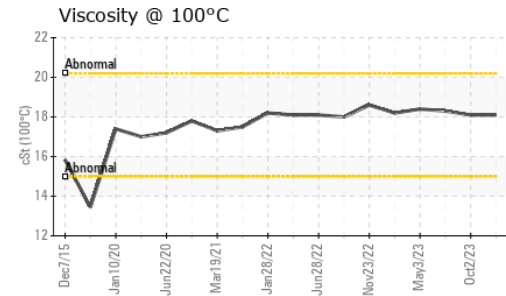
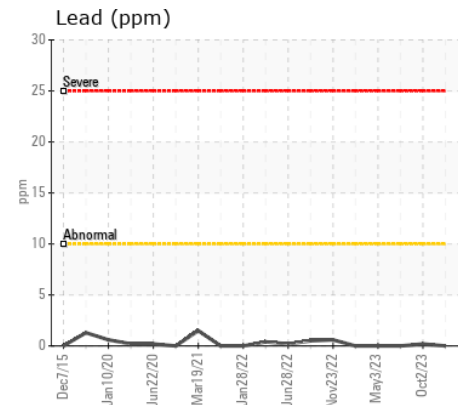
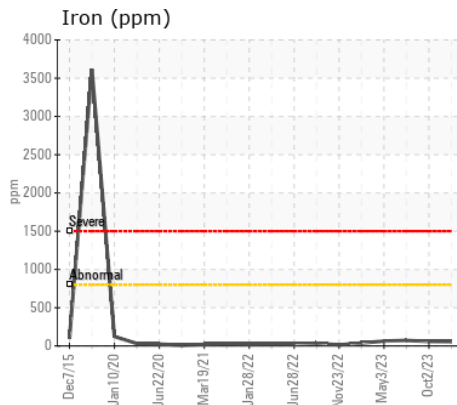
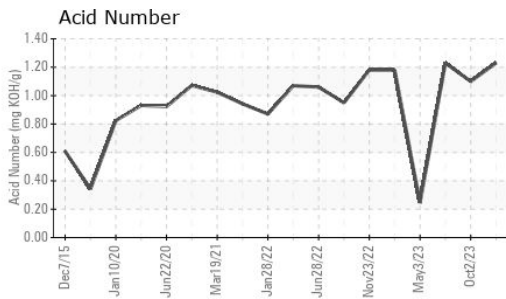
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>400	17	18	20
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	5	4
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		3	4	5
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		15	13	13
Calcium	ppm	ASTM D5185m		3240	3100	3655
Phosphorus	ppm	ASTM D5185m		962	959	1006
Zinc	ppm	ASTM D5185m		1196	1183	1293
Sulfur	ppm	ASTM D5185m		4764	4858	6382
Acid Number (AN)	mg KOH/g	ASTM D8045		1.23	1.10	1.23
Visc @ 40°C	cSt	ASTM D445		210	208	212
Visc @ 100°C	cSt	ASTM D445		18.1	18.1	18.3
Viscosity Index (VI)	Scale	ASTM D2270		94	95	95



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003056 **Received** : 16 Jan 2024
Lab Number : 06061344 **Diagnosed** : 18 Jan 2024
Unique Number : 10832726 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)

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To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)